

s/n: 09/672,159

date: 9-2-04

4032 ((385/33,34,93) or (359/642,809,811,819)).CCLS. fiber same lens same ((anti\$reflect\$5 or AR) with coat\$5) same	USPAT; US-PGPUB; IBM_TDB	9/2/04 13:4
18 substrate same layer lens same ((anti\$reflect\$5 or AR) with coat\$5) same substrate same	USPAT; US-PGPUB; IBM_TDB	9/2/04 10:4
289 layer lens same ((anti\$reflect\$5 or AR) with coat\$5) same substrate same	USPAT; US-PGPUB; IBM_TDB	9/2/04 10:4
289 layers	USPAT; US-PGPUB; IBM_TDB	9/2/04 15:2
10 1 and 4	USPAT; US-PGPUB; IBM_TDB	9/2/04 11:2
5 5195150.URPN.	USPAT	9/2/04 10:4
14 5790730.URPN.	USPAT	9/2/04 10:4
0 6152610.URPN. ("4070516"   "4268113"   "4826272"   "4969712"   "4976506"   "5093879"   "5125054"   "5200631"   "5345529"   "5351331"   "5790730"	USPAT	9/2/04 10:4
12   "5956150").PN.	USPAT	9/2/04 10:4
79 5093879.URPN.	USPAT	9/2/04 10:4
12 5260587.URPN.	USPAT	9/2/04 10:4
8 5359208.URPN.	USPAT	9/2/04 10:5
4 6304694.URPN.	USPAT	9/2/04 11:2
0 6625350.URPN. ("4815807"   "4995709"   "5394493"   "5400429"   "5446815"   "5815624"   "6010251"   "6012852"   "6019522"   "6142678"   "6168319"   "6263133"   "6304694"   "6328482"   "6393179"   "6404955"	USPAT	9/2/04 11:2
16 "2002/0057873").PN.	USPAT	9/2/04 11:2
36 fiber adj collimator adj array	USPAT; US-PGPUB; IBM_TDB	9/2/04 11:2
4 Jian-Benjamin\$9.in. ("3968564"   "4292512"   "4466696"   "4897711"   "4934784"   "4945400"   "5181224"   "5195150"   "5247597"   "5259054"   "5337398"   "5345529"   "5346583"   "5434939"   "5471552"   "5501893"	USPAT; US-PGPUB; IBM_TDB	9/2/04 11:3
19 "5742720"   "5859940"   "6023546").PN.	USPAT	9/2/04 11:2
21 5346583.URPN. ("4349410"   "4354898"   "4433898"   "4464458"   "4613398"   "4653847"   "4875750"   "4923564"   "5073003"   "5145793"   "5155778"   "5247597"   "5265177"   "5270258"   "5343546"   "5346583"   "5452118"   "5600741"   "5696862"   "5761350"   "5764832"   "5853960"	USPAT	9/2/04 11:3
25   "5872880"   "5883988"   "5911022").PN.	USPAT	9/2/04 11:3
5 micro\$2lens same (fused adj silica) same glass same layer	USPAT; US-PGPUB; IBM_TDB	9/2/04 11:4
1 ("6483961").PN. ((385/33,34,93) or (359/642,809,811,819,619,620) or	USPAT; US-PGPUB; IBM_TDB	9/2/04 11:4
6588 (257/232,233,432,435,437)).CCLS.	USPAT; US-PGPUB; IBM_TDB	9/2/04 13:5
529 lens same substrate same ((ar or anti\$2reflect\$5) with coat\$3)	USPAT; US-PGPUB; IBM_TDB	9/2/04 14:3
34 23 and 24	USPAT; US-PGPUB; IBM_TDB	9/2/04 13:5
190 24 and silica and glass	USPAT; US-PGPUB; IBM_TDB	9/2/04 13:5
10 23 and 26	USPAT; US-PGPUB; IBM_TDB	9/2/04 14:0
1 ("6483961").PN.	USPAT; US-PGPUB; IBM_TDB	9/2/04 14:5
519 lens same spacer same fiber	USPAT; US-PGPUB; IBM_TDB	9/2/04 14:3
109 23 and 85	USPAT; US-PGPUB; IBM_TDB	9/2/04 14:3
1 24 same 85	USPAT; US-PGPUB; IBM_TDB	9/2/04 14:3
36 86 and ((ar or anti\$2reflect\$5) with coat\$3)	USPAT; US-PGPUB; IBM_TDB	9/2/04 14:3

("4111524"   "4153330"   "4198117"   "4274706"   "4279464"   "4299488"   "4343532"   "4387955"   "4479697"   "4522462"   "4583820"   "4622662"   "4626069"   "4634215"   "4643519"   "4652080"   "4671607"   "4703472"   "4708425"   "4726645"   "4740951"   "4741588"   "4744618"   "4746186"   "4748614"   "4749247"   "4752108"   "4760569"   "4763969"   "4773063"   "4786133"   "4819224"   "4834485"   "4836634"   "4857726"   "4923271"   "4926412"   "4930855"   "4934784"   "4979821"   "5026131"   "5107359"   "5170451"   "5228103"   "5278687"   "5355237"   "5363220"   "5440416"   "5442472"   "5450510"   "5457573"   "5500910"   "5513289"   "5526155"   "5541774"   "5555334"   "5583683"   "5606434"   "5657406"   "5703722"   "5742416"   "5745270"   "5745271"   "5745612"   "5748350"   "5748815" 70   "5768450"   "5777763"   "6011884"   "6011885").PN.	USPAT	9/2/04 14:3
34 4819224.URPN.	USPAT	9/2/04 14:3
2 6271970.URPN.	USPAT	9/2/04 14:4
("4815807"   "4995709"   "5394493"   "5400429"   "5446815"   "5815624"   "6010251"   "6012852"   "6019522"   "6142678"   "6168319"   "6263133"   "6304694"   "6328482"   "6393179"   "6404955"   16 "2002/0057873").PN.	USPAT	9/2/04 14:4
33 Helkey-Roger\$9.in.	USPAT; US-PGPUB; IBM_TDB	9/2/04 14:5
3 93 and (index with refract\$5)	USPAT; US-PGPUB; IBM_TDB	9/2/04 15:3
("2982859"   "3649105"   "3990780"   "4303302"   "4365863"   "4378144"   "4421381"   "4598585"   "4626066"   "4654663"   "4657339"   "4677290"   "4696062"   "4855017"   "4866699"   "4922756"   "5016072"   "5030004"   "5083857"   "5097354"   "5172262"   "5203208"   "5226321"   "5271075"   "5488862"   "5524153"   "5536988"   "5541756"   "5555558"   "5627669"   "5629790"   "5670881"   "5673139"   "5796880"   "5878177"   "5920417"   "5943157"   "5943454"   "5960132"   "5960133"   "6000280"   "6031656"   "6075239"   "6097858"   "6097859"   "6097860"   "6101299"   "6253001"   "6278812"   54 "6289145"   "6295154"   "6320993"   "6330102"   "6337760").PN.	USPAT	9/2/04 14:5
614 lens same ((anti\$reflect\$5 or AR) with coat\$5) same substrate	USPAT; US-PGPUB; IBM_TDB	9/2/04 15:2
408 96 and (index with refract\$5)	USPAT; US-PGPUB; IBM_TDB	9/2/04 15:3
180 97 and (359/\$.ccls. or 385/\$.ccls. or 257/\$.ccls.)	USPAT; US-PGPUB; IBM_TDB	9/2/04 15:3
75 98 and fiber	USPAT; US-PGPUB; IBM_TDB	9/2/04 15:3
("3492484"   "3649105"   "4179183"   "4421381"   "4479697"   "4574191"   "4598585"   "4654663"   "4696062"   "4696545"   "4701011"   "4745357"   "4815806"   "4834484"   "4834485"   "4838637"   "4859012"   "4875756"   "4886331"   "4922756"   "4923269"   "4941724"   "4978193"   "4981335"   "4993796"   "5016072"   "5044713"   "5077622"   "5077815"   "5083857"   "5097354"   "5172262"   "5203208"   "5226321"   "5440654"   "5450245"   "5488862"   "5524153"   "5536988"   "5627669"   "5629790"   "RE35575"   "5647033"   "5673139"   "5689360"   "5822125"   "5920417"   "5963682"   "6000280"   "6002818"   "6046859"   "6097858"   "6097859"   "6097860"   "6101299"   "6208469"   "6222679"   "6253001"   "6328482"   60 "6330102").PN.	USPAT	9/2/04 15:3
1 ("6328482").PN.	USPAT; US-PGPUB; IBM_TDB	1/15/03 13:5
333 fiber near3 socket	USPAT; US-PGPUB; IBM_TDB	1/14/03 14:0
328 refract\$4 near3 (microlens or micro\$2lens or (micro adj lens))	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:2
1266 anodic adj bond\$3	USPAT; US-PGPUB; IBM_TDB	1/14/03 14:1
933 wafer adj stack\$4	USPAT; US-PGPUB; IBM_TDB	1/14/03 14:1
16 (microlens or micro\$2lens or (micro adj lens)) near3 sag	USPAT; US-PGPUB; IBM_TDB	1/14/03 14:2

4 ("5,870,224") or ("4,666,248") or ("5,066,099") or ("4,721,361")).PN.	USPAT; US-PGPUB; IBM_TDB	1/14/03 14:2
20 (microlens or micro\$2lens or (micro adj lens)) near3 hybrid	USPAT; US-PGPUB; IBM_TDB	1/15/03 14:0
1 single adj mode adj fiber adj unit	USPAT; US-PGPUB; IBM_TDB	1/14/03 14:3
32367 single near2 mode ear2 fiber near2 unit	USPAT; US-PGPUB; IBM_TDB	1/14/03 14:3
36 (single near2 mode ear2 fiber near2 unit) and (fiber near3 socket)	USPAT; US-PGPUB; IBM_TDB	1/14/03 14:5
4 4076377.URPN.	USPAT	1/14/03 14:3
12 5495541.URPN.	USPAT	1/14/03 14:3
("3968564"   "4292512"   "4466696"   "4897711"   "4934784"   "4945400"   "5181224"   "5195150"   "5247597"   "5259054"   "5337398"   "5345529"   "5346583"   "5434939"   "5471552"   "5501893"		
18 "5742720"   "6023546").PN.	USPAT	9/2/04 10:1
9 5346583.URPN.	USPAT	1/14/03 14:4
10 5853960.URPN.	USPAT	1/14/03 14:4
("4749662"   "5216414"   "5266501"   "5404005"   "5554446"   "5561319"   "5593913"   "5595930"   "5604362"   "5739562"   "5747790"		
14   "5853960"   "5859450"   "5965452").PN.	USPAT	1/14/03 14:4
("4349410"   "4354898"   "4433898"   "4464458"   "4613398"   "4653847"   "4875750"   "4923564"   "5073003"   "5145793"   "5155778"   "5247597"   "5265177"   "5270258"   "5343546"   "5346583"   "5452118"   "5600741"   "5696862"   "5761350"   "5764832"   "5853960"		
25   "5872880"   "5883988"   "5911022").PN.	USPAT	1/14/03 14:4
1 6328482.URPN.	USPAT	1/14/03 14:5
("3492484"   "3649105"   "4179183"   "4421381"   "4479697"   "4574191"   "4598585"   "4654663"   "4696062"   "4696545"   "4701011"   "4745357"   "4815806"   "4834484"   "4834485"   "4838637"   "4859012"   "4875756"   "4886331"   "4922756"   "4923269"   "4941724"   "4978193"   "4981335"   "4993796"   "5016072"   "5044713"   "5077622"   "5077815"   "5083857"   "5097354"   "5172262"   "5203208"   "5226321"   "5440654"   "5450245"   "5488862"   "5524153"   "5536988"   "5627669"   "5629790"   "RE35575"   "5647033"   "5673139"   "5689360"   "5822125"   "5920417"   "5963682"   "6000280"   "6002818"   "6046859"   "6097858"   "6097859"   "6097860"   "6101299"   "6208469"   "6222679"   "6253001"   "6328482"		
60 "6330102").PN.	USPAT	1/14/03 14:5
18560 fiber near3 optic\$3 near3 (coupl\$4 or pigtail or (pig adj tail) or pig\$2tail)	USPAT; US-PGPUB; IBM_TDB	1/14/03 14:5
5860 optic\$3 near3 (cement or adhesive or glue or fasten\$4)	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:2
(optic\$3 near3 (cement or adhesive or glue or fasten\$4)) and (refract\$4		
26 near3 (microlens or micro\$2lens or (micro adj lens)))	USPAT; US-PGPUB; IBM_TDB	1/14/03 14:5
optic\$3 near3 (cement or adhesive or glue or fasten\$4) and ((fused adj		
33 silica) same silicon)	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:2
(single near2 mode ear2 fiber near2 unit) and (optic\$3 near3 (cement		
785 or adhesive or glue or fasten\$4))	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:2
((single near2 mode ear2 fiber near2 unit) and (optic\$3 near3 (cement		
or adhesive or glue or fasten\$4))) and (refract\$4 near3 (microlens or		
7 micro\$2lens or (micro adj lens)))	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:2
269 collimat\$4 near3 (microlens or micro\$2lens or (micro adj lens))	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:2
2000 (fused adj silica) same silicon	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:2
(collimat\$4 near3 (microlens or micro\$2lens or (micro adj lens))) and		
2 ((fused adj silica) same silicon)	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:2
337 (359/642).CCLS.	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:5
(collimat\$4 near3 (microlens or micro\$2lens or (micro adj lens))) and		
0 ((359/642).CCLS.)	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:5
68202 (359).CLAS.	USPAT; US-PGPUB; IBM_TDB	1/14/03 15:5

((359/\$).CCLS.) and (collimat\$4 near3 (microlens or micro\$2lens or	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:1
86 (micro adj lens)))	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:1
68202 (385/33, 34, 93).CCLS. or (359).CLAS.	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:1
((385/33, 34, "93" or 359/\$).CCLS.) and (collimat\$4 near3 (microlens or	USPAT; US-PGPUB; IBM_TDB	9/2/04 10:2
86 micro\$2lens or (micro adj lens)))	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:2
((385/33, 34, "93" or 359/\$).CCLS.) and (collimat\$4 near3 (microlens	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:2
8 or micro\$2lens or (micro adj lens))) and grin	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:2
10 multilayer near3 fiber near3 coupler	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:2
694 (multilayer or multi\$2layer or (multi adj layer)) near3 (coupl\$3 or socket)	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:2
14 multilayer near3 fiber near3 (coupl\$3 or socket)	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:3
(multilayer or multi\$2layer or (multi adj layer)) near3 fiber near3	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:2
22 (coupl\$3 or socket)	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:2
("4673270"   "4798436"   "4976512"   "5011251"   "5044716"		
"5129020"   "5179603"   "5268979"   "5295210"   "5295211"   "5339372"		
13   "5412745"   "5754720").PN.	USPAT	1/14/03 16:2
23336 fiber near3 (coupl\$3 or socket)	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:3
(fiber near3 (coupl\$3 or socket)) and (fiber near3 optic\$3 near3		
17094 (coupl\$4 or pigtail or (pig adj tail) or pig\$2tail))	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:3
((fiber near3 (coupl\$3 or socket)) and (fiber near3 optic\$3 near3		
(coupl\$4 or pigtail or (pig adj tail) or pig\$2tail))) and (refract\$4 near3		
54 (microlens or micro\$2lens or (micro adj lens)))	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:4
14 5680186.URPN.	USPAT	1/14/03 16:4
("4790632"   "4904063"   "5052783"   "5101279"   "5161042"		
7 "5165075"   "5680186").PN.	USPAT	1/14/03 16:4
("3622224"   "3680950"   "3697150"   "4470668"   "4534622"		
"4626303"   "4709991"   "4790632"   "4793691"   "4836652"   "4884876"		
"4963002"   "4985285"   "5029985"   "5052783"   "5054890"		
"5056896"   "5064697"   "5078475"   "5089904"   "5101279"   "5150138"		
23   "5151801").PN.	USPAT	1/14/03 16:4
2 ("Re26506"   "1263065").PN.	USPAT	1/14/03 16:4
155 (two near2 dimension\$2) near2 (lens near2 array)	USPAT; US-PGPUB; IBM_TDB	1/14/03 16:4
2238 anod\$3 near2 bond\$3	USPAT; US-PGPUB; IBM_TDB	1/15/03 15:5
281 (microlens or micro\$2lens or (micro adj lens)) near2 substrate	USPAT; US-PGPUB; IBM_TDB	1/15/03 17:3
(anod\$3 near2 bond\$3) and ((microlens or micro\$2lens or (micro adj		
1 lens)) near2 substrate)	USPAT; US-PGPUB; IBM_TDB	1/15/03 14:0
(microlens or micro\$2lens or (micro adj lens)) same (anod\$3 near2		
5 bond\$3)	USPAT; US-PGPUB; IBM_TDB	1/15/03 15:4
5 ("4822167"   "5122663"   "5155412"   "5789748"   "6077417").PN.	USPAT	1/15/03 14:4
104 (anod\$3 near2 bond\$3) same optic\$3	USPAT; US-PGPUB; IBM_TDB	1/15/03 15:5
31 polish near2 substrate same bond\$3	USPAT; US-PGPUB; IBM_TDB	1/15/03 16:5
("4532003"   "4638552"   "4963505"   "5097314"   "5100814"		
6 "5234535").PN.	USPAT	1/15/03 15:5
70 4638552.URPN.	USPAT	1/15/03 15:5
2 5200010.URPN.	USPAT	1/15/03 16:3
4 (("5846638" or ("5200010" or ("5195150" or ("5790730")).PN.	USPAT; US-PGPUB; IBM_TDB	1/16/03 11:4
11 (microlens or micro\$2lens or (micro adj lens)) near2 sag	USPAT; US-PGPUB; IBM_TDB	1/15/03 17:3
233 (reduce near3 stress) same trench	USPAT; US-PGPUB; IBM_TDB	1/16/03 11:4
45 ((reduce near3 stress) same trench) and lithography	USPAT; US-PGPUB; IBM_TDB	1/16/03 11:4
4 ("4683637"   "4853348"   "4925805"   "5183775").PN.	USPAT	1/16/03 11:5